

SSA ISO Summary and FAQ 14 Feb 00 (Revised)
Based on earlier SST ISO Cheat Sheet by Rich Young

The subject matter is organized in the order of the 20 ISO Elements. All documents listed below can be obtained from the Ames ISO web page.

Definitions:

ISO = International Standards Organization

SLP = System Level Procedure (Center level document)

SOP = Standard Operating Procedure (Directorate level document, usually)

DCR = Document Control Request

CAR = Corrective Action Request

NCR = Nonconformance Report (we wouldn't want any of these, would we)

Documents you should read: (These have changed recently!)

SLP Management and Performance of Research (53.ARC.0009.2)

**Work Instruction for the Publication and/or Presentation of Research
Results (53.ARC.0009.2.1)**

Code S SOP: Management and Performance of Research (53.S.0009)

SLP/SOP Calibration & Control of Equipment (53.ARC.0011, 53.S.0011)

Documents you should have at least skimmed over:

Ames Quality Manual (53.ARC.0000)

SLP Design & Development of Hardware & S/W (53.ARC.0004.1, 4.2)

And SLP Configuration Management (53.ARC.0004.3)

SLP/SOP Document and Data Control (53.ARC.0005, 53.S.0005)

SLP Corrective and Preventive Action (53.ARC.0014)

SLP/SOP Handling & Storage of Specialty Items (53.ARC.0015, 53.S.0015)

SLP/SOP Quality Records (53.ARC.0016, 53.S.0016)

WWW Bookmarks to make:

ARC ISO 9K site: <http://dqa.arc.nasa.gov/iso9000/>

Code S site: http://ace.arc.nasa.gov/cgi-bin/postdoc/get/postdoc/s/folder.ehtml?url_id=4607

OSS NRAs: <http://www.hq.nasa.gov/office/oss/research.htm>

Industry / Military / FAA standards <http://www.hq.nasa.gov/iso/ihs/ihs.htm>

NASA Policies etc – NODIS <http://nodis.hq.nasa.gov>

4.1 Management Responsibility

The **SSA staff** needs to know that management is committed to having a quality policy, providing staff and other resources to support quality management, and continuously assessing the effectiveness of the quality management provisions.

Question Do you know the **Ames** quality policy?

Suggested Answer The **Ames** quality policy is: "Ames will provide world class quality products and services that meet or exceed our customers' requirements."

4.2 Quality System

The **SSA staff** needs to know that **Ames** management maintains a document called the Quality Manual that contains written procedures defining the general **interoperating** processes and plans for how a customer's requirements will be appropriately handled. The Quality Manual basically defines how **Ames** manages the quality system (how we do business to assure quality).

Question Are you familiar with the contents of **Ames** Quality Manual?

Suggested Answer - If you are, If not, The **Ames** Quality Manual is available on the **Web** for me to read. The branch office computer has a bookmark (Ames ISO 9000 Resource Center) to the web site which can be used to access the web site.

Question How are you sure you have the latest copy of a formal document?

Suggested Answer The most current version of formal **code S** documentation is on the **ISO site**. There are NO formal division (SS) or branch (SSA) procedure documents. All hard copies must have dates that match the version on **web**. In addition, a Master List of all documentation, with current version number, is available at this site.

4.3 Contract Review

Question What is your product?

Suggested Answer Basic research and the results therefrom.

Question Who is your customer?

Suggested Answer NASA HDQTRS and the Scientific Community.

Question – What and where is your customer agreement?

Suggested AnswerThe funded proposals and their award letters or NF506 forms. They are kept in the branch office

Question How do you know what your customer requirements are?

Suggested AnswerThe posted NRAs, AOs, etc. (Know how to access them on the web of the appropriate NASA web page.)

Question How do you handle changes to customer requirements?

Suggested AnswerThe RTOP process., whereby we submit RTOPS to HDQTRS.

Question How do affected staff learn about changes to customer requirements?

Suggested AnswerThe proposal PI tells them, and it is documented in the RTOP.

4.4 Design Control

Question: How do you ensure that you are using the correct versions of your own drawings, designs, etc. for all hardware, software, and systems deliverables?

Suggested answer: I follow the configuration management requirements set by each project (e.g. SOFIA) that I'm working on. Documents are not usually governed by configuration management until they are "released" or accepted by the project (and out of our hair). External documents (e.g. 747 drawings, etc.) are maintained by the project. The manager for the project is: _____ (know names for each project – Charlie Sobeck, Chris Wiltsee etc.).

4.5 Document Control

Question: How do you ensure that you are using the correct versions of Quality System (ISO 9K), ARC forms, and / or external documents for all of your work?

Suggested answer: I use the latest documents as I need them by looking them up on their respective WWW sites (true for ARC ISO, ARC forms, MILSPEC, FAA, etc.).

4.6 Purchasing

NASA Ames and Contractor procurement procedures are used for general purchasing. You have received training if you use a bank card.

4.7 Control of Customer Supplied Product

NASA Ames and Contractor receiving procedures are used for general control of customer supplied products. Projects that you work on may have specific control requirements that you must know about, adhere to, and document compliance. No additional procedures for general receiving, handling, damage notification, or return of customer supplied products are required to assure data quality.

4.9 Process Control – Performing and Publishing Research

Question How do you assure that you follow the right procedures in your research?

Suggested Answer I follow the project plan described in the research proposal, which is part of the customer agreement

Question How do you assure that you are disseminating (publishing) results that are technically correct and meet your customer's requirements?

Suggested Answer Papers / talks / etc. are reviewed technically and programmatically (ARC 310) and by NASA export control (Form NF1676) before publication.

4.10 Inspection and Testing

Question How do you assure that your product meets the customer's requirements?

Suggested Answer All proposals are peer reviewed by NASA and the Scientific Community. Reporting of research results are also peer reviewed by same before presentation or publication.

Question How do you control the quality of your software and hardware?

Suggested Answer Most of our software is used only in research, is not a customer deliverable product, and is therefore controlled by the general procedures of the SLP governing management and performance of research. Software developed for SOFIA SWPs (& other contracts) must be

developed in accordance with SLP 53.ARC.0004.1 and your project's requirements. Instruments are subject to Design Reviews and Verifications as specified by their host projects (e.g. SOFIA).

4.11 Control of Inspection, Measuring, and Test Equipment

Each PI has the responsibility for calibrating each piece of as required by his/her research. Each PI maintains a record of user calibration, or maintains documented justification of why the particular instrument does not have to be calibrated. All instruments must have a valid calibration sticker.

Question Who has records of calibration status?

Suggested Answer A Responsible Equipment User (PI or delegate) maintains copies of user calibration records for his/her equipment. The NASA calibration labs also maintain these records if it has done the calibration (See 53.S.0016)

4.14 Corrective and Preventive Action

Employee suggestions, nonconformance citations, and procedure change requests result in a list of action items that must be tracked and resolved.

Question Where are the records of corrective and preventive actions resulting from internal audits maintained?

Suggested Answer A special database for internal audit corrective actions is being maintained on the center ISO WWW site. This is referred to as the CAR database.

4.15 Handling, Storage, Packaging, Preservation and Delivery

Materials (chemicals, paints, etc.) must be stored, handled, etc. as specified on their Material Safety Data Sheets (MSDSs; see <http://dq.arc.nasa.gov/qh/safety.htm>). Hazardous materials (almost anything...) must be handled as specified on their MSDSs and the NASA Safety Manual (<http://server-mpo.arc.nasa.gov/Directives/AHBs/AHB1700.1.html>).

All ESD (electro-static discharge) sensitive materials (detectors etc.) must be stored as directed in NASA STD-9700-7, Electrostatic Discharge Control (<http://standards.nasa.gov>). All personnel handling ESD-sensitive devices must take ARC ESD training.

Question Have you taken the ARC ESD safety training?

No, I do not handle static-sensitive devices. Person X handles these devices in my lab so he is required to take this training. This training can be verified by certificates in the SSA Branch Office.

Suggested Answer – Here they are, oedplac.nasa.gov/qh/safety.htm WWW site. I have previously been to the site and identified the materials.

Question Can you show me the Material Safety Data Sheets for all chemicals in your laboratory?

Suggested Answer – Here they are, oedplac.nasa.gov/qh/safety.htm WWW site. I have previously been to the site and identified the materials.

4.16 Control of Quality Records

Question How do you make sure quality records are controlled?

Suggested Answer The Code S Directorate manages a list of quality records that are maintained (see attached Quality Records Index). A PI maintains certain records required (Approved Proposal, letter of acceptance, etc.). Others are kept by the branch or SS division.

4.17 Internal Quality Audits

The **SSA staff** needs to know that a group of internal staff members have been trained to perform audits of the quality management system. These people will evaluate whether **SSA Staff** have an understanding of the quality provisions that are currently in use, and whether SSA staff can demonstrate how their procedures are covered by directorate or center documents.

Problems uncovered during internal audits result in management action items that must be addressed prior to later audits. These action items may require **SSA Staff** attention.

4.18 Training

Question How do you show you are qualified to do your job?

Suggested Answer Education, training, and experience (PhD, meetings, experience doing basic research). Qualifications have been reviewed by my supervisor and are stored with my Position Description at my personnel office in my personnel folder. Job specific training requirements and classes are maintained by my supervisor and **SSA Branch Office**.

